Portfolio and Strategy Management

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Agenda

- Creating value!

- The business challenges and blockers to achieving value

- The Five Keys to Success

- How does this look in reality?

- DEMO

- A closer look at portfolio optimization – the way ahead?

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It's all about creating value!

Optimize resources to drive value creation for the business

Evaluate investments to align with business priorities and reduce costs in a disciplined way

Increase ROI – invest more wisely and drive out inefficiency
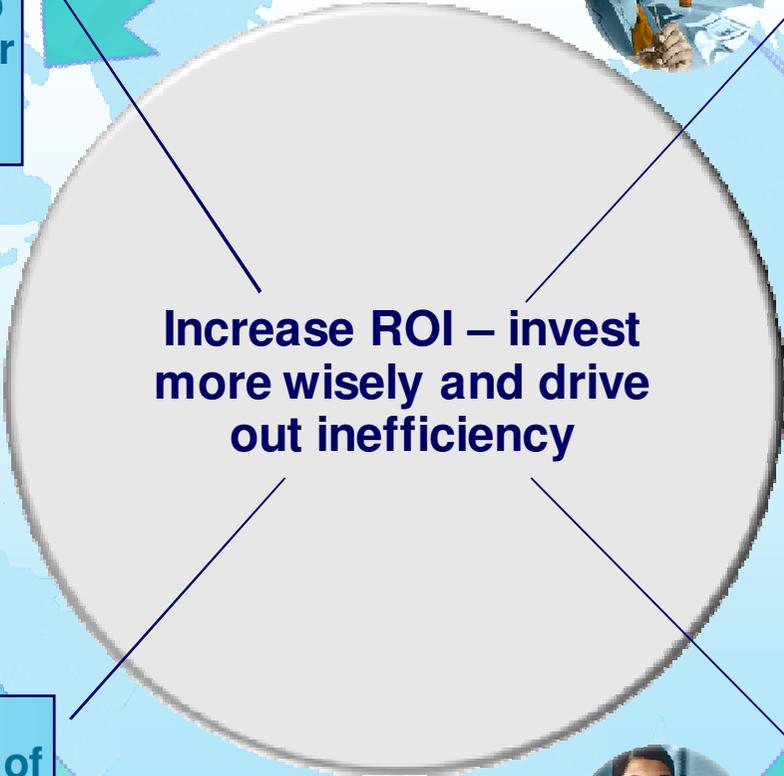
Measure the efficiency of delivery for continuous improvement

Increase predictability through best practices and collaboration across domains

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Business Challenges
Zero-growth budgets

Do More!

With Less!

Executive Programs CIO Survey
Increases in CIO Budgets Over Previous Year, 1998-2009 (Worldwide)

- 1998: 15.0%
- 1999: 15.9%
- 2000: 9.7%
- 2001: 10.1%
- 2002: 1.3%
- 2003: 0.0%
- 2004: 1.6%
- 2005: 2.5%
- 2006: 2.7%
- 2007: 3.0%
- 2008: 3.2%
- 2009: 0.16%

Trend Line

Source: Gartner

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Business Challenges
Balancing resource allocations to support business innovation

Today

100%

1/3

2/3

IT Spending

New Solutions

Application Enhancements

Operations Support

Operations Maintenance

Strategic Change Capacity

Cost of Operations

Target

Liberated funding for direct savings or transformational investment

New Solutions

Application Enhancements

Operations Support

Operations Maintenance
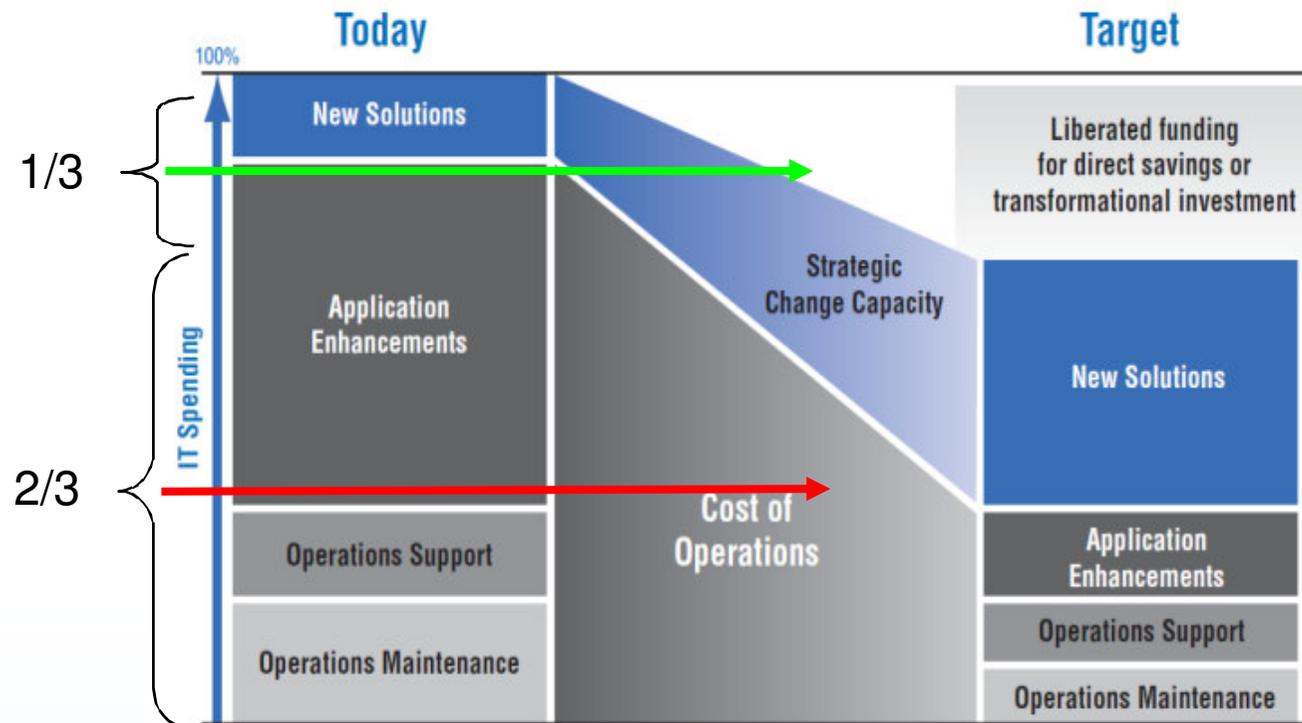
Re-balance your resources to support innovation!

Some organizations estimate that ongoing operations and maintenance consume **2/3 or more** of their budgets, leaving too little for innovation

Original graphic created by David Puzas, WW Marketing Executive for IBM Enterprise Services, 2007

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Oh, that's easy!

- To do more with less, **ALL** we have to do is become more efficient!

- To support innovation, **ALL** we have to do is rebalance our resources!

- **If it's so easy, why aren't we laughing?**

Graphic by Henry Syverson, 1958.

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Well, really, it's not so easy

- Concerns flow down the organization while measures (and data) flow up
- We need tools to plan, track, and deliver on our commitments at every level

Line of Business Executive	commits to →	Profit, Internal Rate of Return
Senior Manager	commits to →	Delivery of business value through the optimal use of resources
Project Manager or Team Lead	commits to →	Project deliverables, cost and schedule

Concerns (arrow flowing down)

Measures (arrow flowing up)

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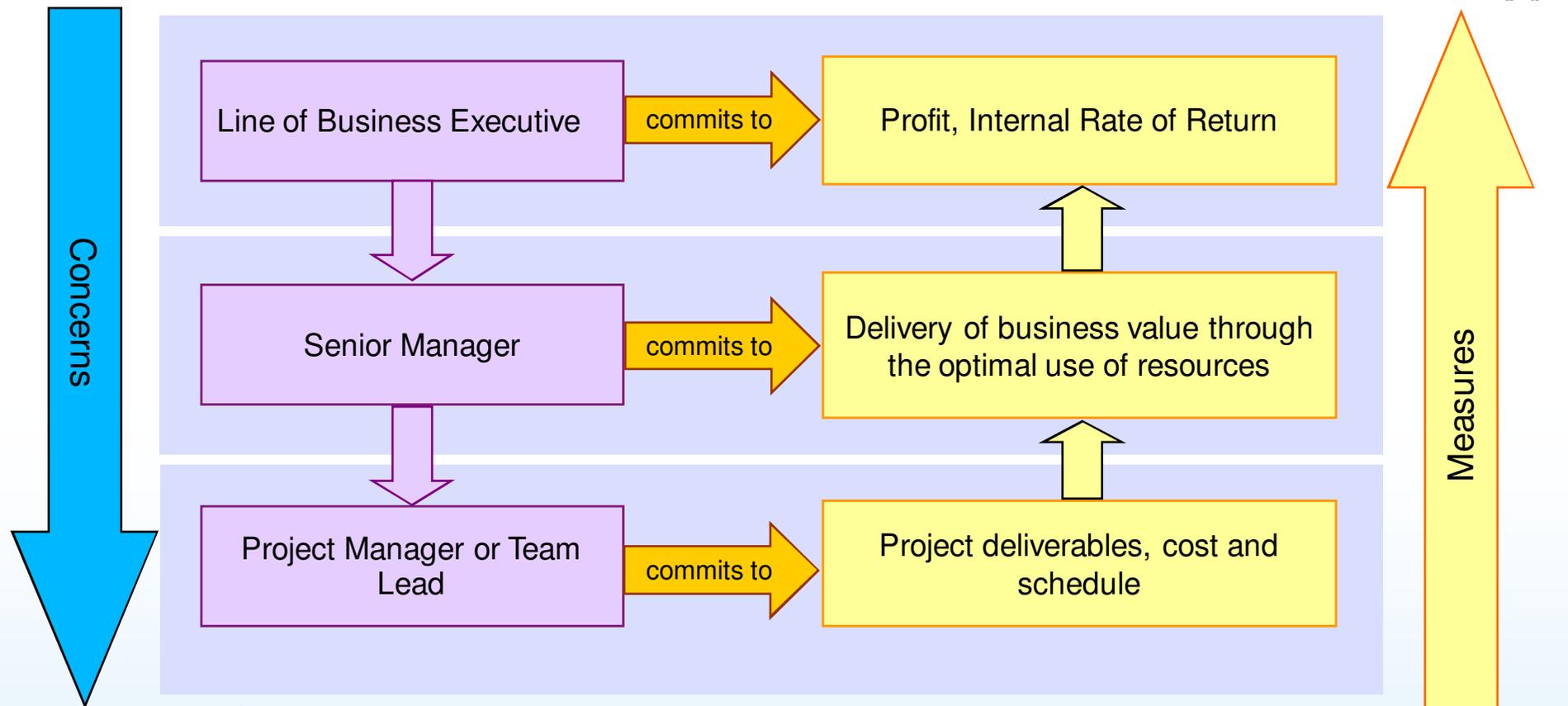
Understanding the blockers
For line of business executives

Executives need more effective support for strategic decision making – but they're blocked

Blocker #1: Its difficult to link an IT project portfolio to the realization of business benefits

Blocker #2: Organizations do not have the ability to reconcile both project delivery and architectural perspectives

Blocker #3: Organizations want to manage lifecycles, not just projects

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Understanding the blockers
For senior managers

Managers need improved metrics and analytics to support continuous process improvement

Blocker #4: Project managers report on the status of a project, but this does not help improve delivery capabilities within the organization

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Understanding the blockers
For project managers and team leads
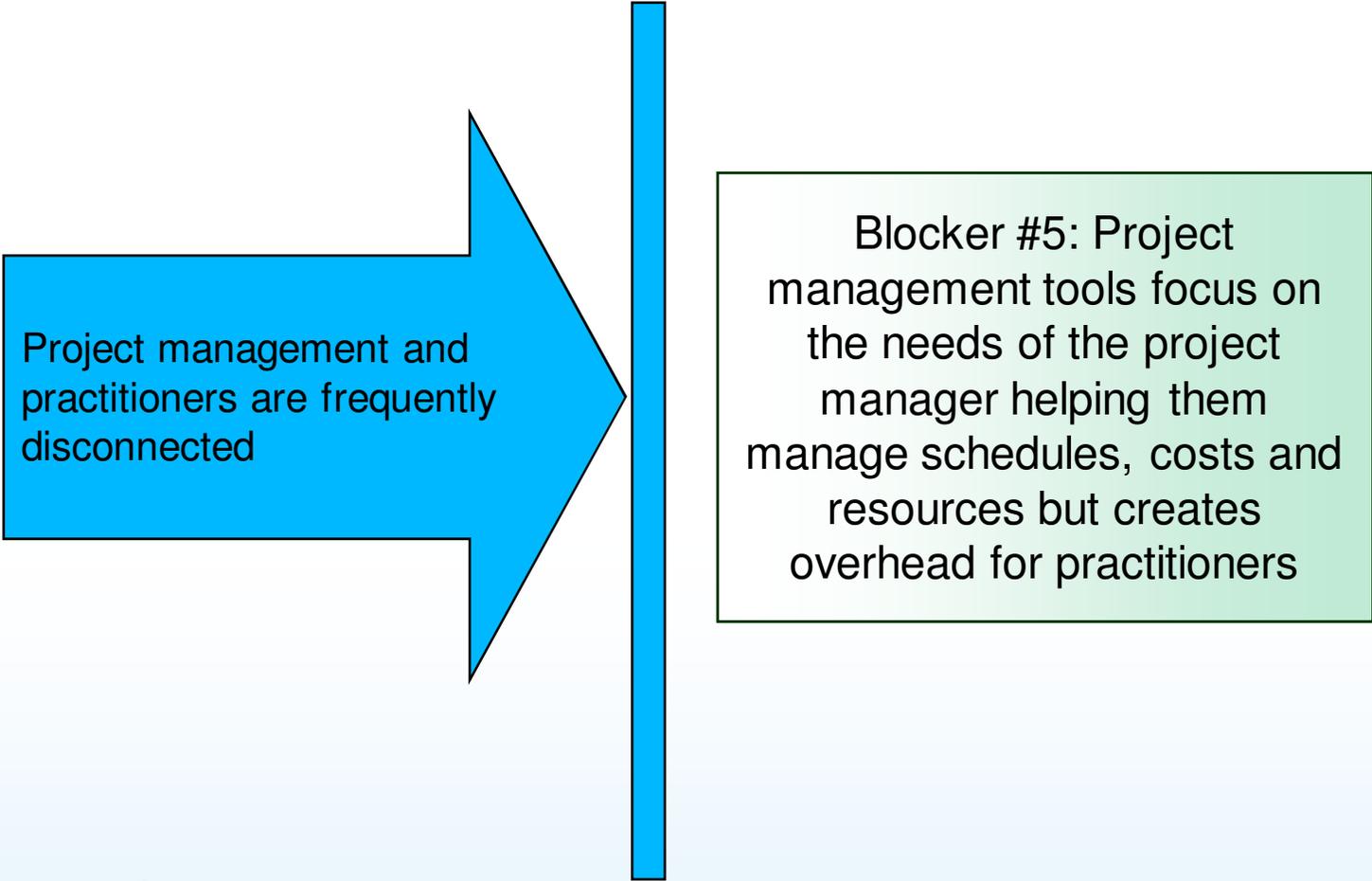
Project management and practitioners are frequently disconnected

Blocker #5: Project management tools focus on the needs of the project manager helping them manage schedules, costs and resources but creates overhead for practitioners

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Five Keys to Success

Blockers

Its difficult to link an IT project portfolio to the realization of business benefits

Organizations do not have the ability to reconcile both project delivery and architectural perspectives

Organizations want to manage lifecycles, not just projects

Project managers report on the status of a project, but this does not help improve delivery capabilities within the organization

Project management tools focus on the needs of the project manager helping them manage schedules, costs and resources but creates overhead for practitioners

Five Keys to Success

1. **Understand the value of investments and tradeoffs** on content rather than becoming "bogged down" in project or resource detail

2. **Build a stronger connection between customers, Enterprise Architecture and portfolio management** disciplines to enable a broader viewpoint for decisions

3. **Leverage lifecycle management** of products, services or IT applications with customer, competitive and capability viewpoints that show how projects deliver against the lifecycle

4. **Gain insight into how delivery practices impact project success**, to inform process and skill improvements and organizational maturity

5. **Provide teams with a collaborative platform** that allows software delivery projects to become more automated, transparent and predictable across all disciplines

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Making it real!

- Now that we understand
  - …the business challenges
  - …the blockers
  - …the Five Keys to Success
  - …and how concerns and data move in an organization
- Let's look at how we can achieve the goal!

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Finding what works for you

- The following example flow can be applied to many different scenarios and contexts

  - Product Management or Product Portfolio Management

  - Application Portfolio Management

  - IT Portfolio Management/Delivery Management

  - Performance Management

- Some or all of the flow may apply to the work you and your organizations are doing

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Determine business needs

- Clearly capture and articulate the needs of the business

- Enforce consistency by defining a common set of attributes

- Maintain a single repository for the needs of the business

- Weigh which needs provide the most value to the business based on stakeholder input
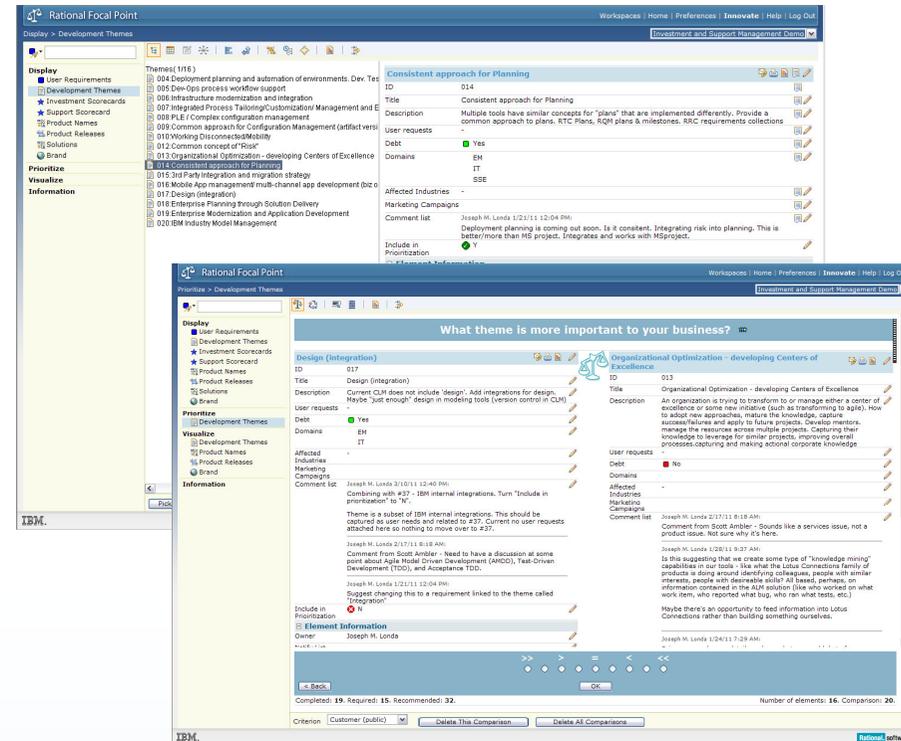
Key #1: Understand the value of investments and tradeoffs on content rather than becoming "bogged down" in project or resource detail

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Assess investment options
Including cost, risk and benefit analysis

- Take into consideration all aspects including business and technical risks and benefits

- Reconcile the project view and the architectural view

- Consider all the options (such as build versus buy versus outsource)

- Understand the constraints such as resources, time, funding and dependencies inherent in each option
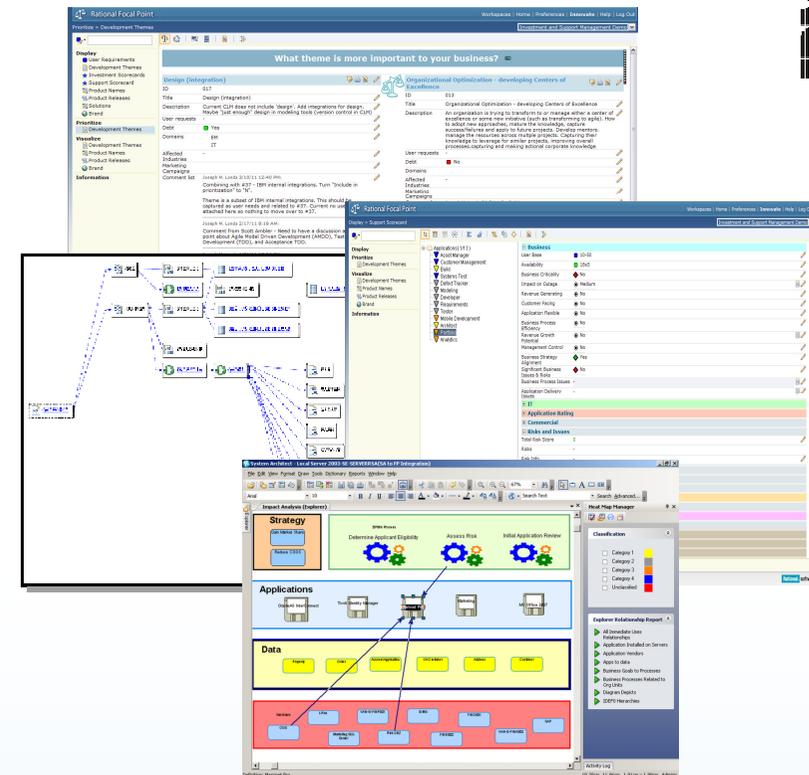
Key #2: Build a stronger connection between customers, Enterprise Architecture and portfolio management disciplines to enable a broader viewpoint for decisions

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Assess market position

- Ask the tough questions about the current market placement

- Determine which areas to invest in based on market size and growth rate

- Understand the competitive landscape

- Capture market feedback including analyst data
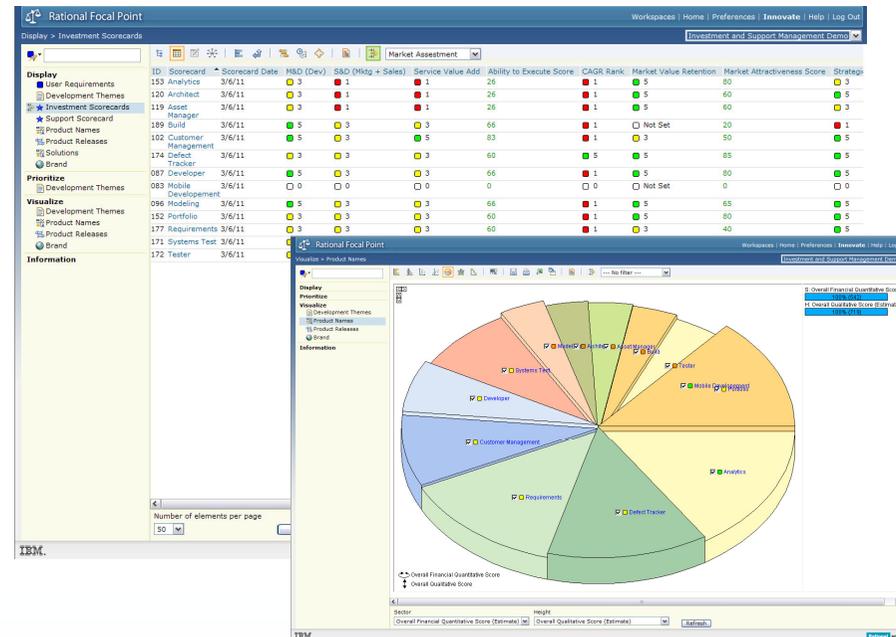
Key #3: Leverage lifecycle management of products, services or IT applications with customer, competitive and capability viewpoints that show how projects deliver against the lifecycle

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Make investment decisions

- Make investment decisions based on –
  - Quantitative and qualitative information
  - Understanding the trade-offs
  - What will bring the most value to the business
- Continuously monitor to make sure investments are progressing towards their business case
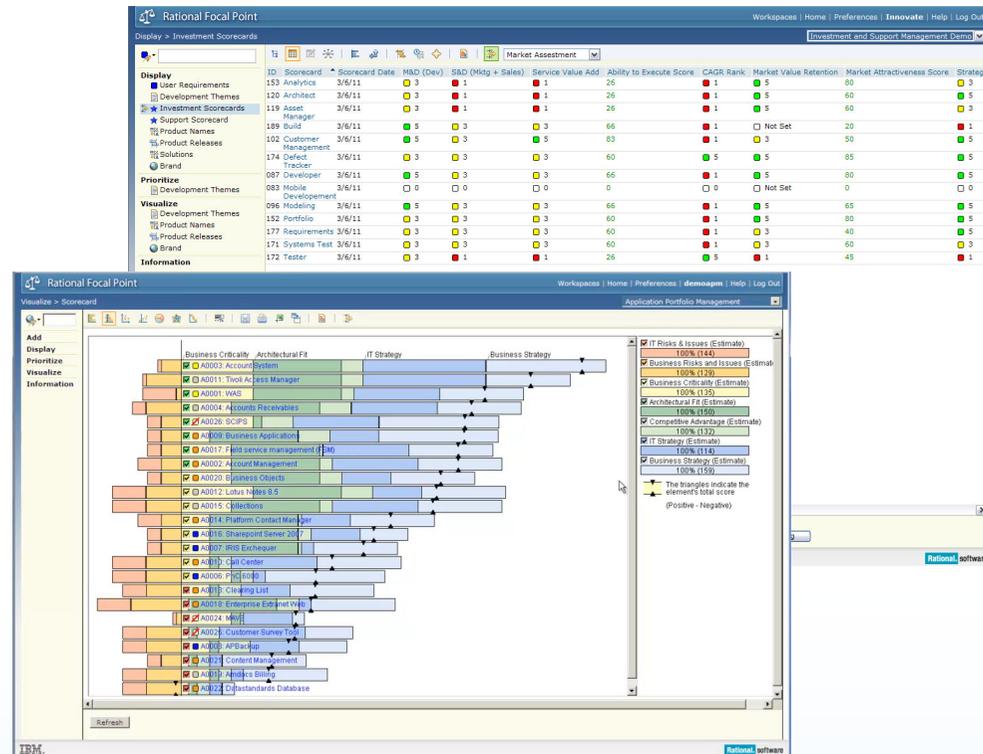
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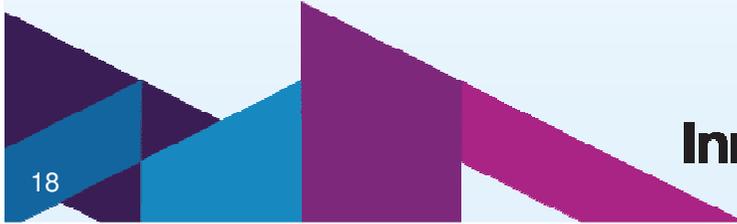
Push projects to execution

- Sequence delivery and commit resources
  - Establish realistic release schedules and roadmaps
  - Work within resource constraints (human, financial) and dependencies
  - Establish a plan that gives a high level overview of the whole release
 - Break work down into manageable iterations
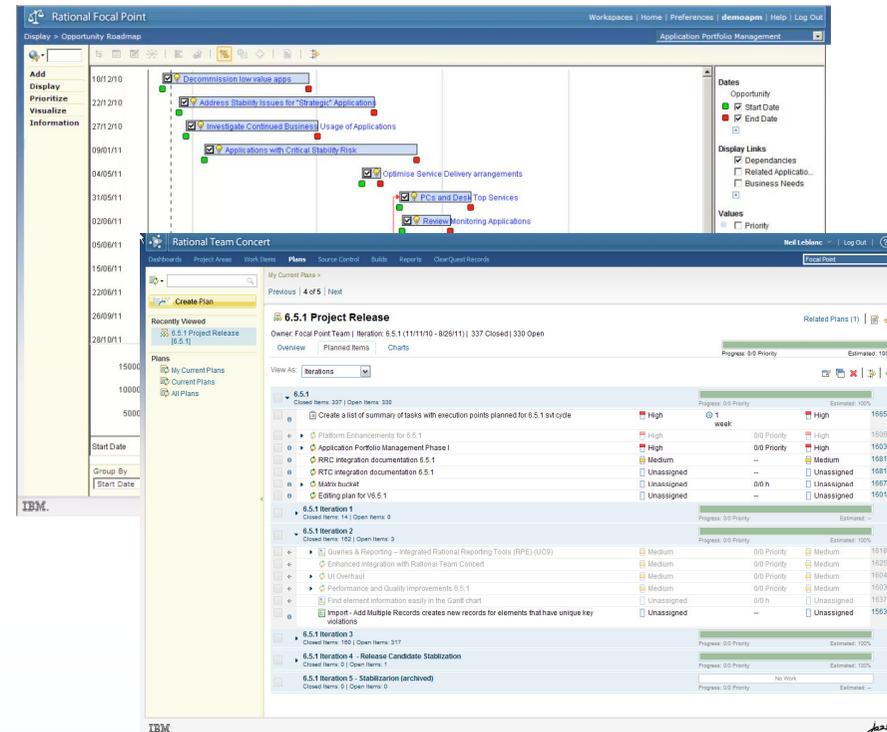
Key #5: Provide teams with a collaborative platform that allows software delivery projects to become more automated, transparent and predictable across all disciplines

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Allocate work to teams

- Allow team members to manage their own workload through Work Items

- As the project manager or team leader, create a release plan that shows all top level work items
  - SCRUM stories and epics
  - All of the child iterations
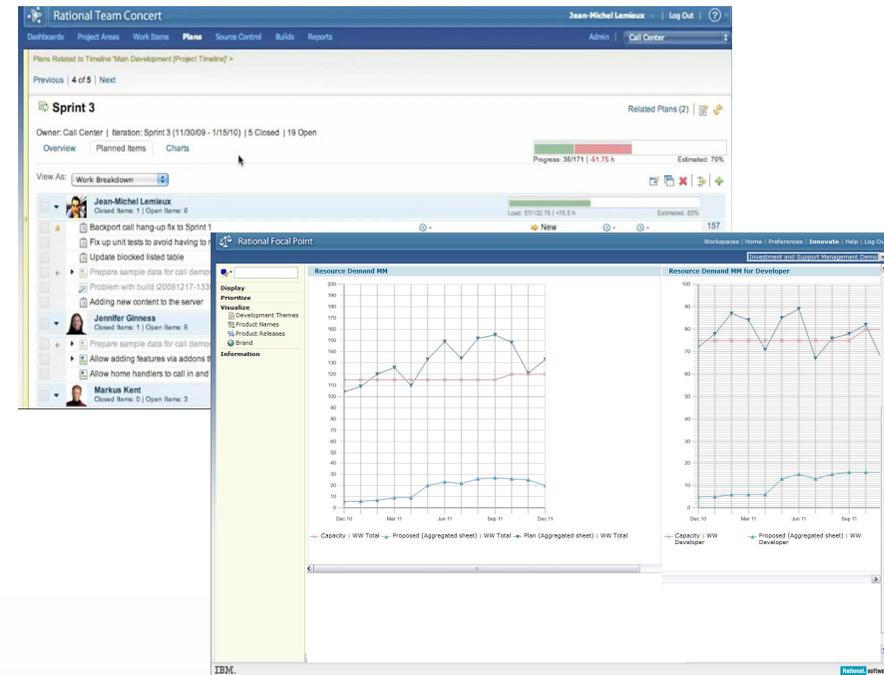
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Perform allocated tasks and provide feedback

- Team members can execute their assigned Work Items and provide feedback on the estimated completion time

- They can also record their actuals for any given Work Item

- Discussion threads can be integrated directly in the Work Items – increasing collaboration and productivity

Key #5: Provide teams with a collaborative platform that allows software delivery projects to become more automated, transparent and predictable across all disciplines

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Monitor project progress

- Project managers and team leads can track where time has been spent for improved accountability and process improvement

- Stakeholders know the project status without having to ask

- For any given role, the user can see the status relative to that role and application they're working in

    - For example, the Development Team Lead reviews the burndown or velocity charts…

    - …while the Product Manager can monitor how the implementation of product requirements is proceeding based on "Estimate" and "Time Remaining" fields


Key #5: Provide teams with a collaborative platform that allows software delivery projects to become more automated, transparent and predictable across all disciplines

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Identify areas for improvement

- Take advantage of best-practice frameworks that help users assess, measure and improve process results

- Automate the collection, measurement and analysis of real time data to reduce errors and facilitate informed decision-making

- Access role-based metrics that provide relevant, timely and actionable information

- Gain visibility into data across projects, products and geographical boundaries such that status and progress can be monitored in a single view

- Report across the lifecycle to quickly locate root causes, prescribe course corrections and predict future outcomes
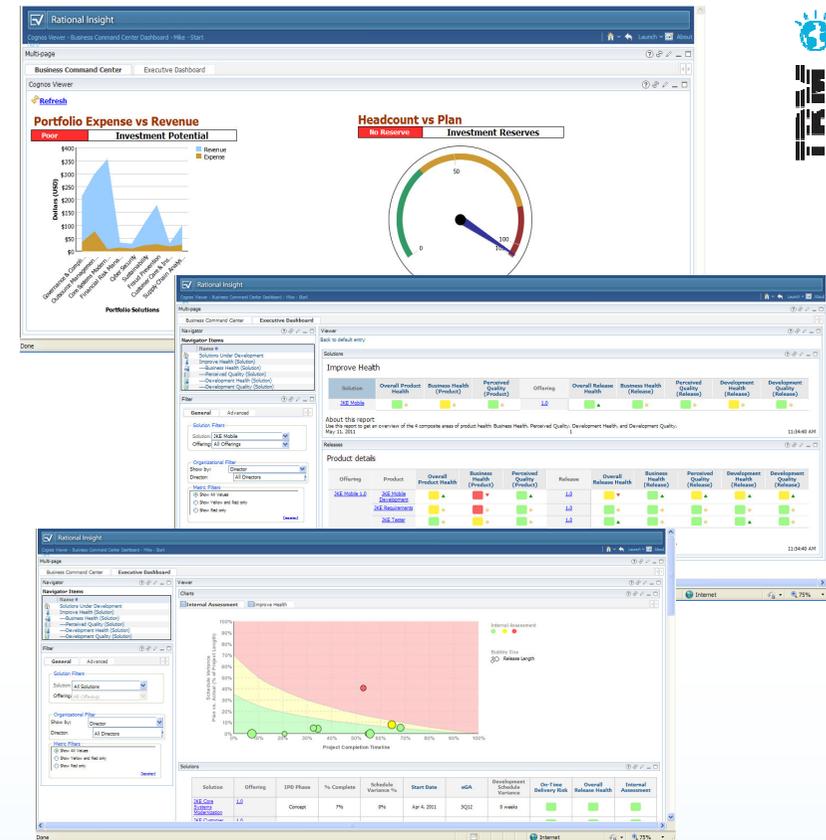

Key #4: Gain insight into how delivery practices impact project success, to inform process and skill improvements and organizational maturity

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Review the portfolio

- The Line of Business Executive can monitor portfolio progress –
  - Overall portfolio progress
  - Cost and schedule variances
- Where the portfolio distribution is based on the business priorities
- …and they can review previous decisions and make adjustments as needed
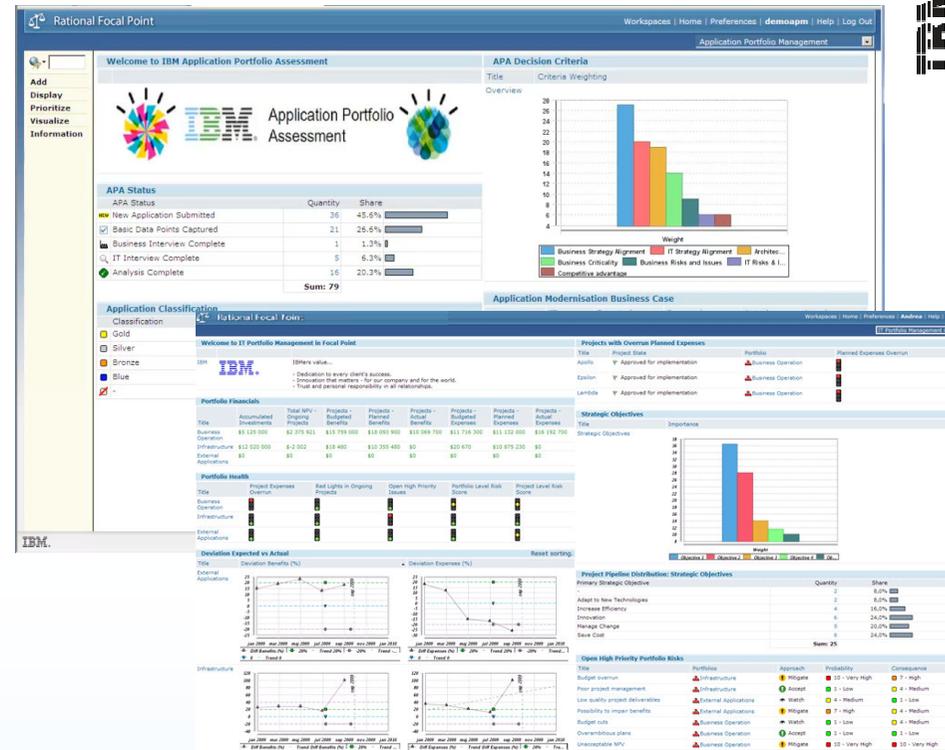
Key #1: Understand the value of investments and tradeoffs on content rather than becoming "bogged down" in project or resource detail

But can we be predictable *and* innovative?

- The less innovative projects are, the less risky they are

- …what if we could have projects that were more predictable without sacrificing innovation?

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Bringing IBM's math department to bear

- **Different activities need different analytics, measures of productivity**
- **We can and must improve the odds of delivery across the lifecycle to drive better predictability**

But wait, there's more!

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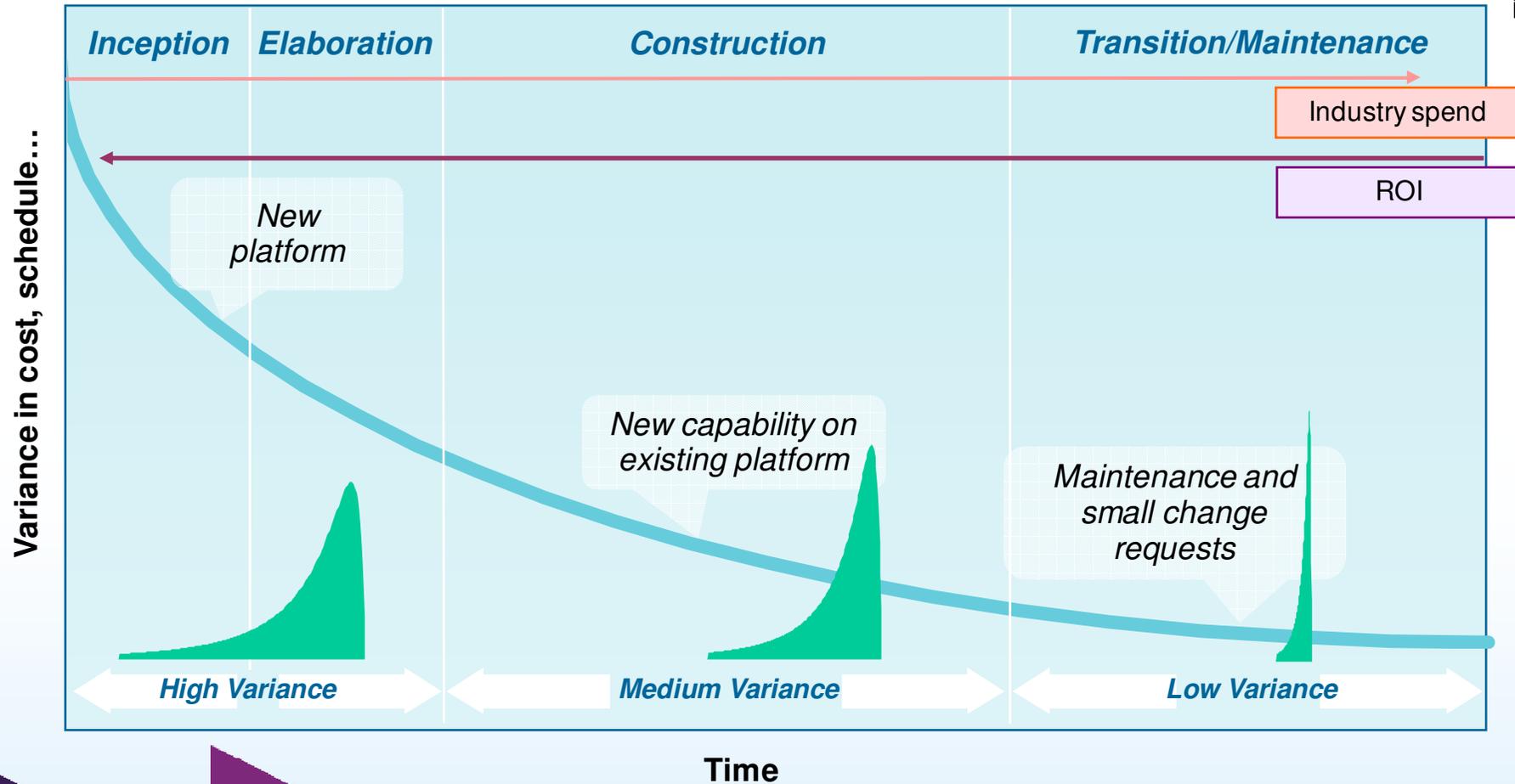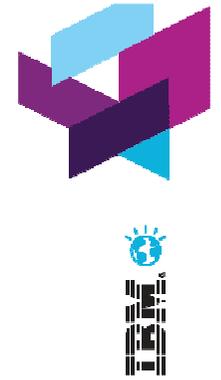
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But what's the common language?

- How are concerns communicated down and measures communicated back up between the stakeholders?

- What is the basis of decision-making?

- Costs are monetary, benefits are monetary

- Even risk and the impact of uncertainty can be monetary –
  - It's about betting and winning the bet!
  - When you invest in a project, you are betting that it will deliver a certain Return on Investment – what are the odds that you will achieve that ROI?

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Money talks…

How do we assess and compare value
without a common language?

The common language of
business and the common
scale of value is
MONEY

We can express value (and benefits, costs, ROI, risk) in terms of money!

The key question: How much is an incomplete development program worth?

Value

Conventional wisdom: 0 till shipped

0   6   Ship date
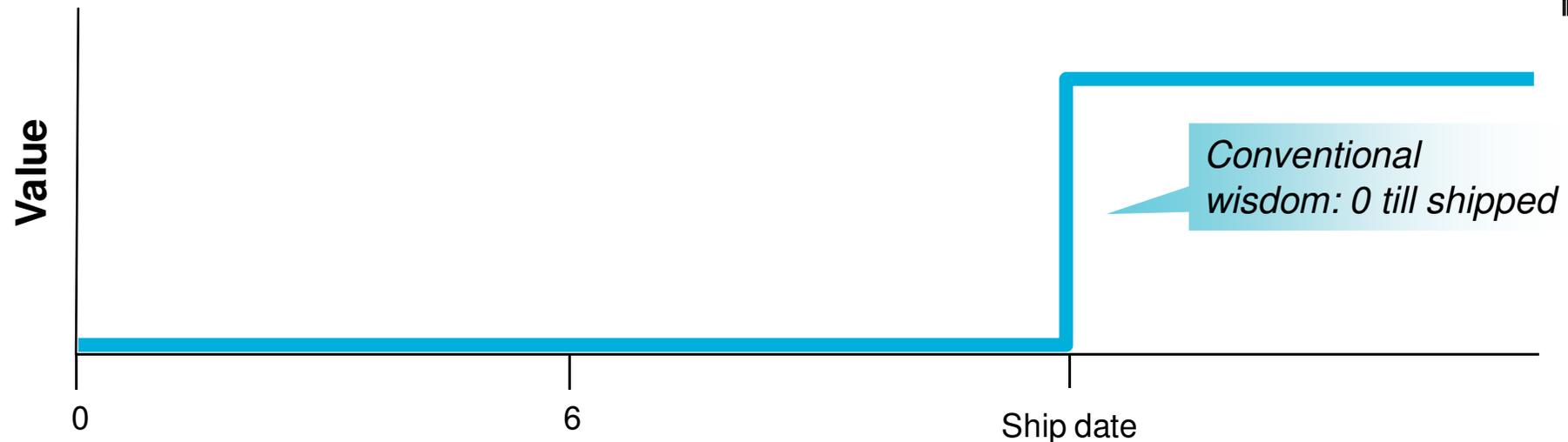
- ⑩ **The conventional wisdom is the accountant's answer**
  - Fails to acknowledge value of work already done
  - Provides no opportunity for ongoing value management
- ⑩ **Can only discuss cost, not value**

If all unshipped efforts are worthless, there is no way to compute value and risk

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Another approach: Things are worth what someone might pay for them

⑩ **Imagine (if you will) you could sell your incomplete development program**

⑩ **The buyer would spend money now to obtain the option to invest in completing the program to receive its benefits**

⑩ **How would one reason about the fair price?**

- The buyer, *reasoning like an investor*, to compute return on investment needs
  - ℰ *Expected* cost to complete
  - ℰ *Expected* benefit received
  - ℰ *The Risk* – the uncertainty of receiving the value

  The economists call this "*incomplete market reasoning*"

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For example

- ⑩ For how much would Boeing sell the 787 program?
- ⑩ Certainly not zero!
- ⑩ The buyer would get the right to spend the rest of the money to get the future benefits

Financier helps answer two key questions supporting value-based decision making.

Are we creating value?

Is this program worth continuing?

| Current value, ROI to date | Likely value at delivery, & likely ROI at delivery |

Program onset: T_0 Today: T_1 Program delivery: T_d

Management Decisions Supported

Monitoring

- Is program healthy?
- Intervene?
- Cut loses?

Investment

- Is program still needed?
- Should we adjust content?
- Should we continue to invest?

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IBM has shipped an investment analysis tool that:

Applies two key concepts

1. For expected costs and value:

   ❧ Must deal with the time value of money – *Net Present Value (NPV)* equation

$$NPV = \sum_{i=1}^{n} \frac{R_i}{(1+r_R)^i} - \sum_{k=1}^{p} \frac{M_k}{(1+r_M)^k} - \sum_{j=1}^{m} \frac{D_j}{(1+r_E)^j}$$

2. For the risk to be undertaken:

   ❧ *Future values* are random variables

Provides key capabilities:

- Consumable, efficient future value input screens and calculation support
- Multiple cost and benefit sheets to align with stake
- Point and click time grid entry, time series of independent variables, project global variables, calculator 'tapes'
- Use Monte Carlo for real time estimate of NPV along with risk/uncertainty
- Financial calculations (e.g. both RoI's, Internal Rate of Return , estimated costs, benefits, …)

M. Cantor, "Measuring and Improving your Return on Investment in Software and System Programs", to appear *Communications of ACM,* September 2011.

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..and talking "money"

Investment analyzer provides financial measures for everyday use

Delivering on the Five Keys to Success

Blockers	Five Keys to Success

Its difficult to link an IT project portfolio to the realization of business benefits

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Rational Focal Point 6.5
Hardwiring the linkage between strategy and execution

- The Rational Team Concert integration allows users to prioritize and manage project scope and rollup project status

- The System Architect integration connects the Enterprise Architecture perspective to the portfolio management perspective in Focal Point

- The Investment Analyzer assists users with financial modeling and business case assessment

- Users can take advantage of advanced resource management allowing skill-based supply and demand tracking and balancing

- Configuration templates included in the product help users get up and running quickly

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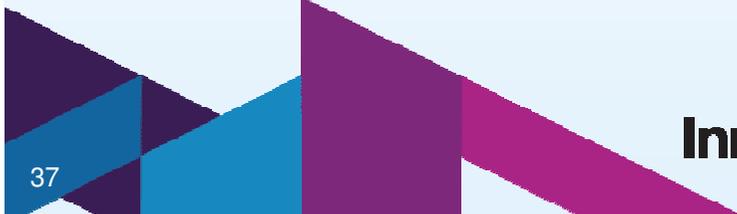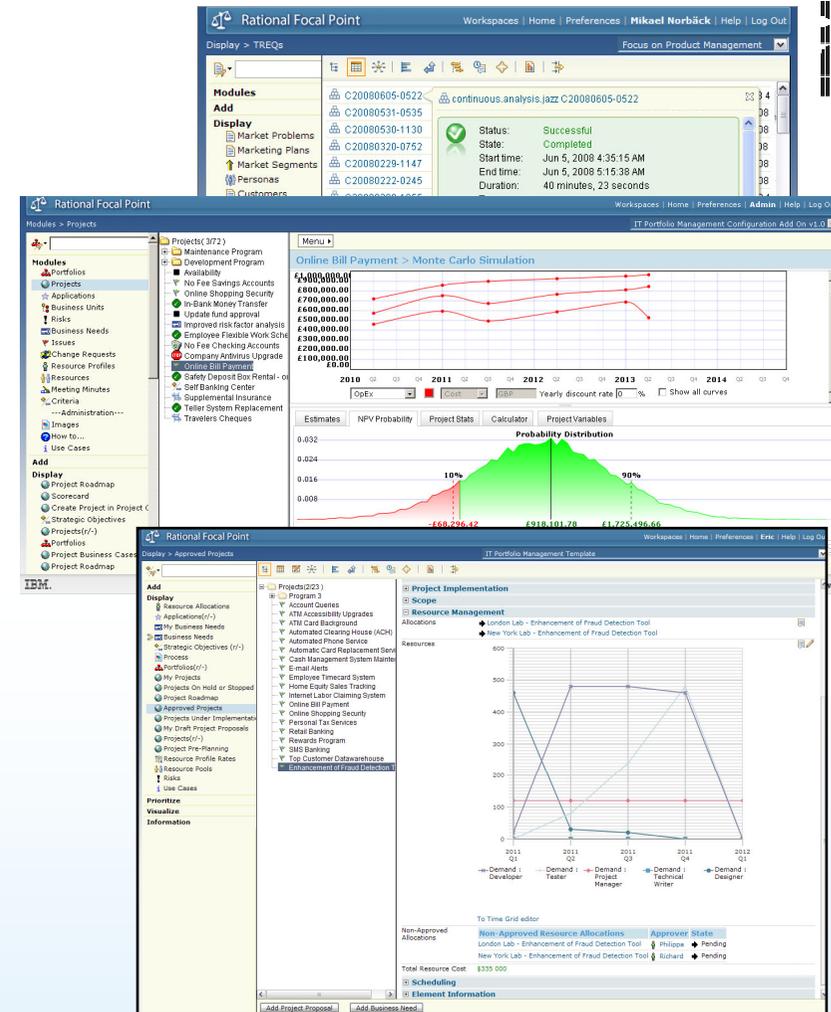
Rational Team Concert 3.0

Enhanced project planning capabilities, templates and risk tracking

- Users can leverage agile and formal planning methodologies – or a hybrid of the two
  - Access new "out-of-the-box" templates for both agile and formal project management
  - Maximize resource allocation and scheduling with integrated planning and execution
  - Quickly view dependencies and critical paths to avoid progress delays
- Stakeholders have increased visibility and insight into project risks
  - Weight and evaluate risk at each step of the development project plan

Leverage enhanced agile and/or formal planning templates

Automated risk management

Development and operations stakeholders gain consensus quickly and easily
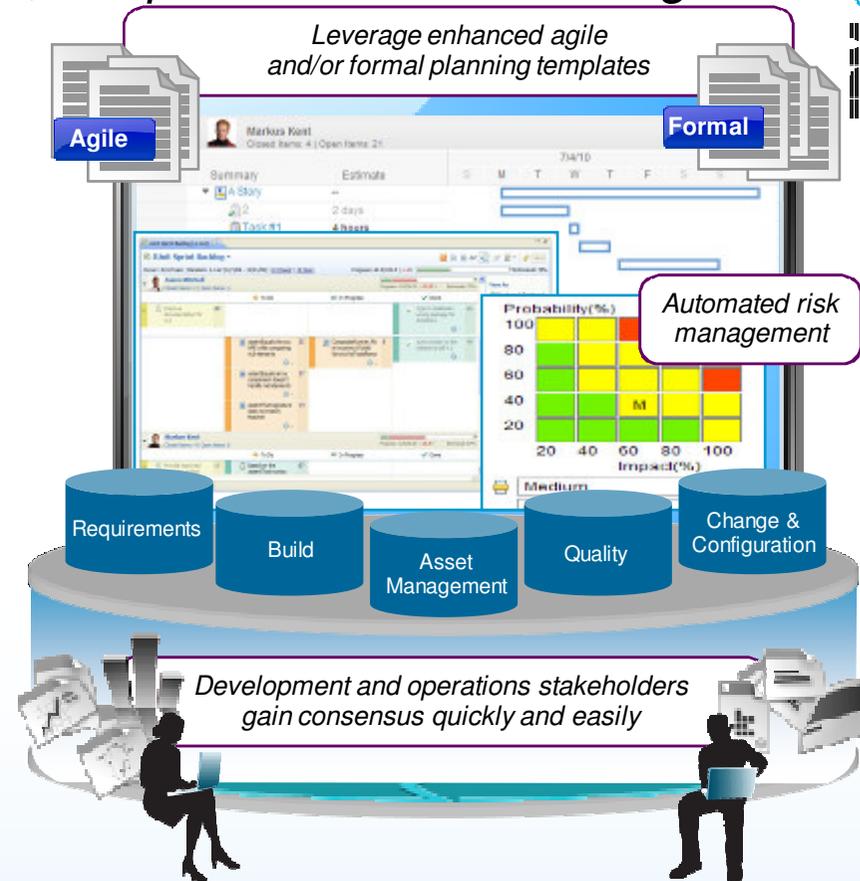
48% of companies surveyed are using a hybrid of multiple development methodologies, 20% agile, 12% iterative and 11% waterfall. All of them could benefit from the new combined project planning capabilities.

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Rational Insight 1.0.1

- Enhanced Rational product integrations
  - Support for Rational Focal Point
  - Support for RTC 3.0

- Installation and Configuration Enhancements
  - 64 bit Linux and Windows server support
  - Full support for IE and Firefox browsers
  - CLM Workbench compatible DW schema
  - Translation to many different languages

- Usability Enhancements
  - Simplified Data warehouse setup and configuration
  - Simplified Dynamic Schema configuration

- OOTB Report and Dashboard Enhancements
  - Exec DB style Project health scorecards
  - CMMI based dashboards / reports
  - Performance Management / RMC dashboards / reports

- Event Studio for KPI and Event monitoring and notification
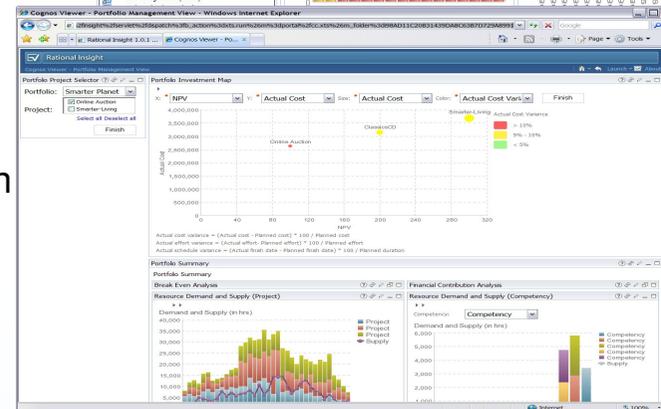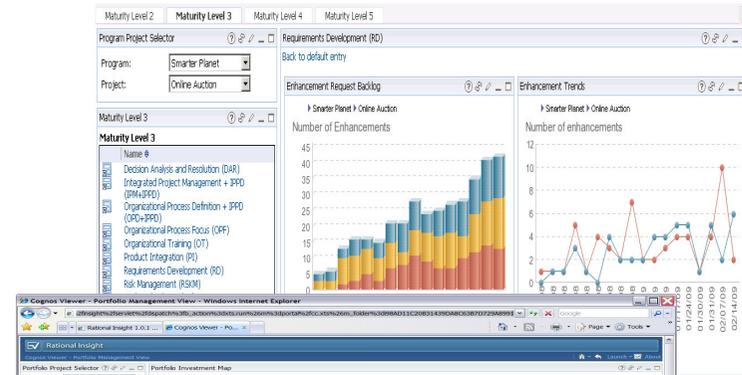
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Rational Publishing Engine 1.1.2

- Distributed environment robustness and scalability
  - Monitor and Control providing administrators with means to monitor jobs and cancel if required
  - Disconnection recovery enabling user mobility and workstation hibernation during document generation
  - Load balance improving concurrency support

- Enhanced template performance and flexibility
  - Dynamic variable support in 'native' filters enabling query variables to be assigned at generation time
  - Conditional repetition independent of data query
  - Post document generation execution enabling workflow integrations

- Template translation facilitating multilingual re-use

- Casting enabling drilldown into nested models

- Migration assistants for SoDA and DocExpress

- Technically
  - Install Manager replacing Installsheild technology
  - Data source support via OSLC Reporting Profile
  - Platforms: Windows 2008 R2 & WAS 6.1 / 7.0
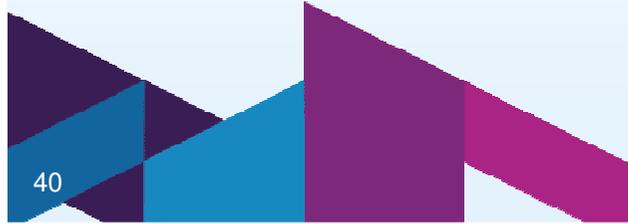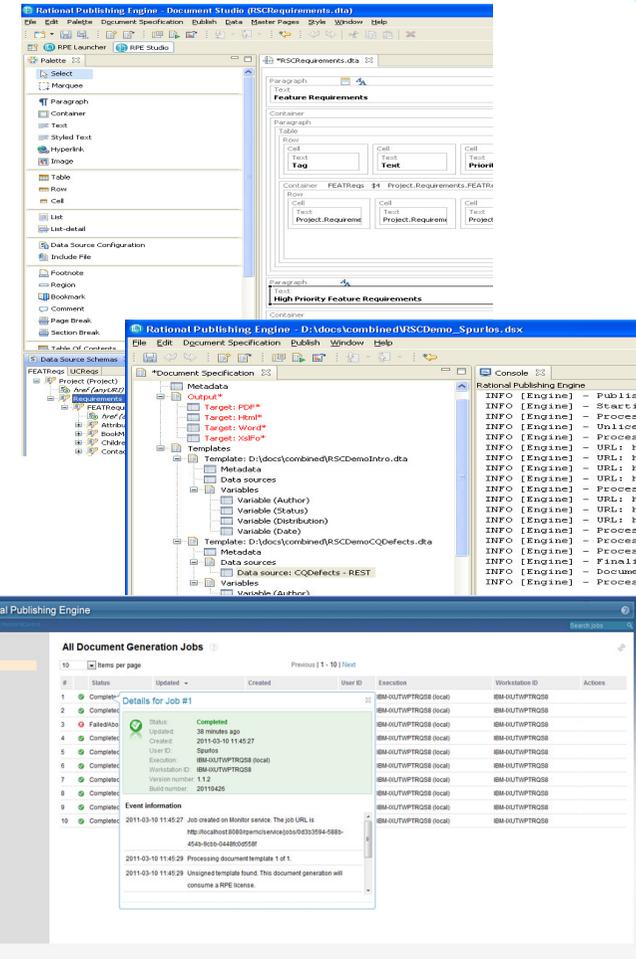
Rational Method Composer 7.5.1

Simplified tailoring, relationship reports, rich content and work item export

- Create a single plug-in based on a method configuration and/or selection of practices to simplify tailoring by non-experts

- New CSV report supports impact analysis and analysis of changes

- Improved element move across plug-ins that simplifies library management

- Enhanced work item template export that bridges the gap for enactment with RTC

- Ability to incorporate multi-media content and JavaScript in published pages

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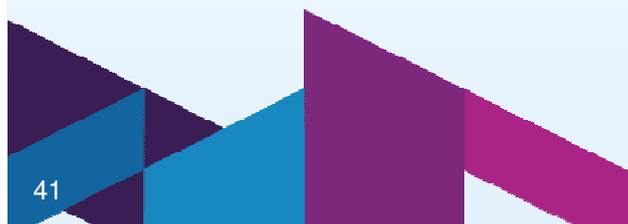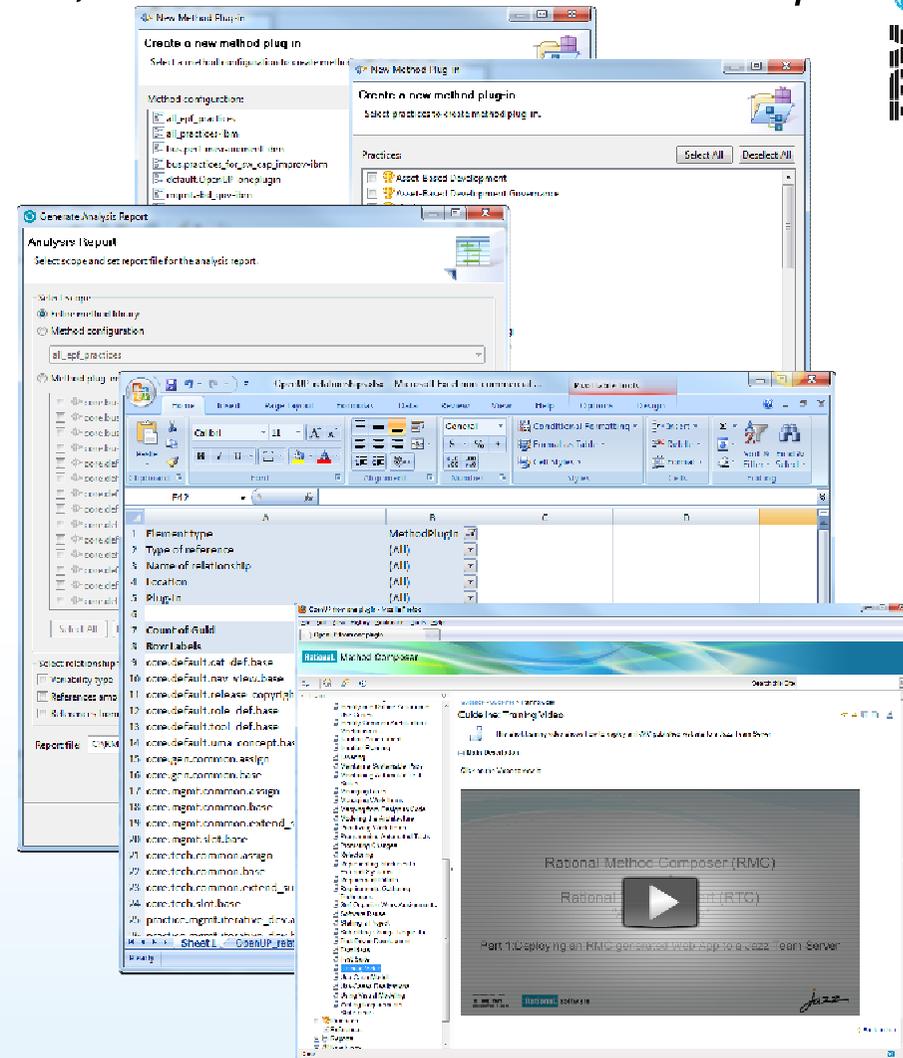
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